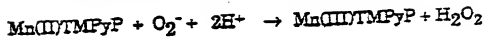
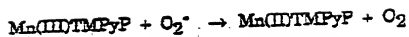


※3

Figure 1

Mechanism



106001-52108860

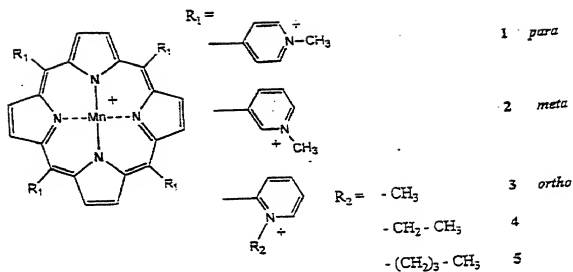


Figure 2. Manganese *meso*-tetraKis *N*-alkyl-pyridinium based porphyrins

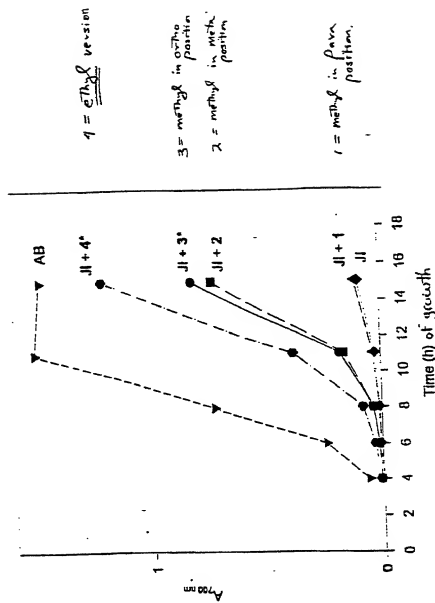
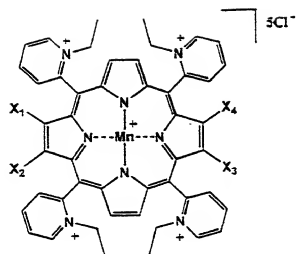


Figure 3 SOD activity in vivo (*E. coli*) of 1, 2, 3* and 4* (25 μ M) in minimal medium (*mixture of isoprenoids, J1 = SODs deficient strain, AB = parental strain).



MnTE-2-PyP^{5-}	$X_1=X_2=X_3=X_4=\text{H}$
$\text{MnCl}_1\text{TE-2-PyP}^{5-}$	$X_1=\text{Cl}, X_2=X_3=X_4=\text{H}$
$\text{MnCl}_2\text{TE-2-PyP}^{5-}$	$X_1=X_2=\text{Cl}, X_3=X_4=\text{H}$
$\text{MnCl}_3\text{TE-2-PyP}^{5-}$	$X_1=X_2=X_3=\text{Cl}, X_4=\text{H}$
$\text{MnCl}_4\text{TE-2-PyP}^{5-}$	$X_1=X_2=X_3=X_4=\text{Cl}$

Figure 4

09880125.100901

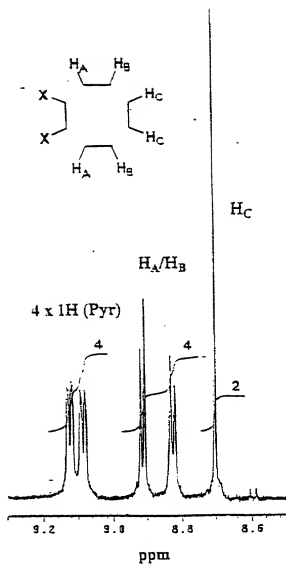


Figure 5

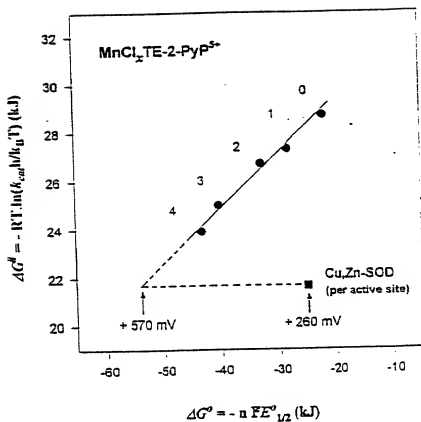
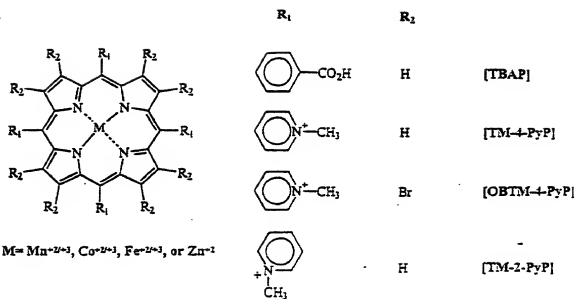


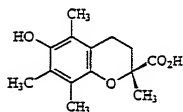
Figure 6

A



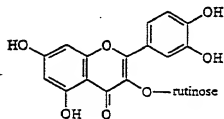
Metalloporphyrins

B



Trolox

C



(+)-Rutin

Figure 7

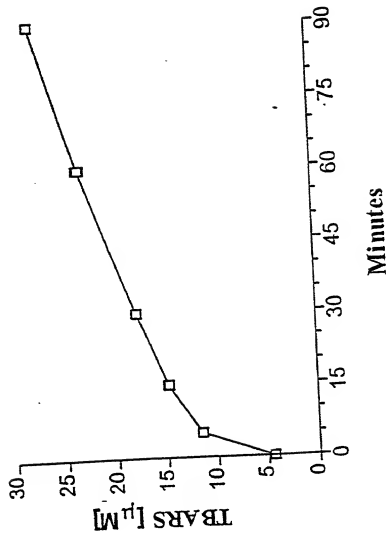


Figure 8

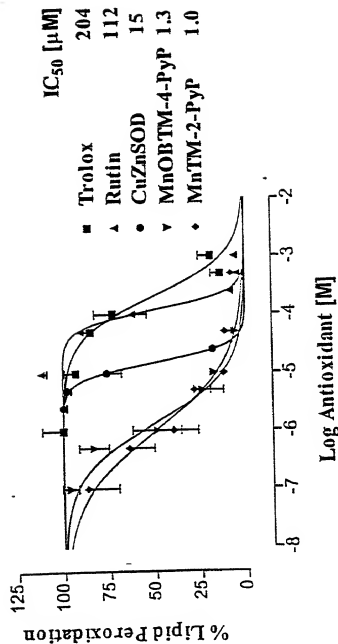


Figure 9

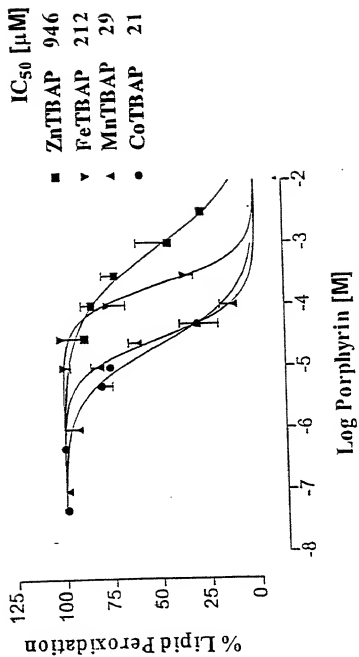


Figure 10

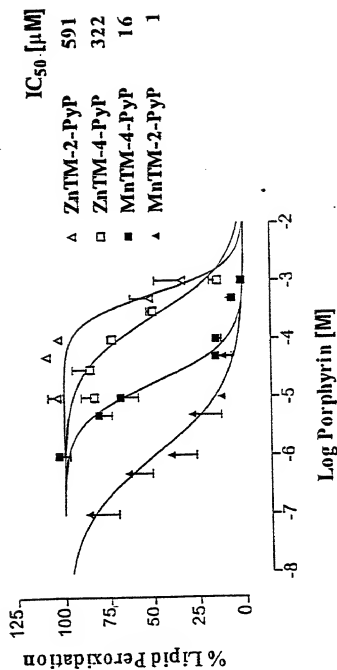


Figure 11